

**REMARKS****Summary of the Office Action**

Claims 5-9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,257,771 to Okayasu in view of U.S. Patent No. 5,253,310 to Delbare et al. ("Delbare") or U.S. Patent Application Publication No. 2003-0053770 to Noddings et al. ("Noddings").

**Summary of the Response to the Office Action**

Applicants have amended claims 5 and 7-9, and canceled claims 1-4 without prejudice or disclaimer. Accordingly, claims 5-9 remain pending in this Application for further consideration.

**All Claims Define Allowable Subject Matter**

Claims 5-9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Okayasu in view of Delbare or Noddings. Applicants respectfully traverse this rejection for at least the following reasons.

With respect to independent claim 5, Applicants respectfully submit that Okayasu, Delbare and Noddings, whether taken individually or in combination, do not teach or suggest the claimed combination including at least a feature of "a third step of separating the fixing jigs from the optical fibers embedded in the epoxy resin," as recited by independent claim 5. The Final Office Action admits that "Okayasu (6,257,771) fails to teach forming the fiber embedded structure by laying the fibers in a jig and dipping in epoxy to form the structure along with pressure and temperature," but relies upon Delbare to allegedly teach that "a structure (8) with

grooves (10) is utilized to hold optical fibers in a predetermined array prior to embedding the fibers with a liquid epoxy and curing.”

In contrast to the present invention of independent claim 5, Delbare merely discloses a substrate 8 formed with grooves 10 to receive fibers 1. Applicants respectfully submit that Delbare is completely silent about separating the substrate 8 with the grooves 10 from the fibers 1. In fact, as explicitly described in col. 4, line 50 to col. 5, line 30 of Delbare, the fibers 1 are purposefully embedded in grooves 10 in a layer of liquid epoxy resin. In other words, Applicants respectfully submit that Delbare neither teaches nor suggests the claimed combination including at least the feature of “a third step of separating the fixing jigs from the optical fibers embedded in the epoxy resin,” as recited by independent claim 5.

In addition, the Final Office Action does not rely upon Noddings to remedy the above-noted deficiencies of Delbare. Further, Applicants respectfully submit that Noddings cannot remedy the deficiencies of Delbare. Accordingly, Applicants respectfully assert that Okayasu, Delbare and Noddings, whether taken individually or in combination, do not teach or suggest the claimed combination including at least the feature of “a third step of separating the fixing jigs from the optical fibers embedded in the epoxy resin,” as recited by independent claim 5.

For similar reasons as those set forth above, Applicants respectfully submit that Okayasu, Delbare and Noddings, whether taken individually or in combination, do not teach or suggest the claimed combination including at least the feature of “a third step of separating the fixing jigs from the optical fibers,” as recited by independent claim 7.

With respect to independent claim 8, Applicants respectfully submit that Okayasu, Delbare and Noddings, whether taken individually or in combination, do not teach or suggest a

claimed combination including at least a feature of “a fourth step of placing copper clads on the upper and lower sides of the semicured prepreg while aligning the copper clads with the semicured prepreg with the attachment members interposed between the semicured prepreg and the copper clads.”

The Final Office Action merely relies upon Noddings to teach “cladding layer.” In contrast to the present invention, however, the cladding layers of Noddings, such as cladding material 1920, etc., are only used to partially embed fiber 1906 (see [0096]) of Noddings. Applicants respectfully submit that Noddings is completely silent about modifying the cladding material 1920 to be placed on the upper and lower sides of a support structure 1904 and be aligning with the support structure 1904 with attachment members interposed between the support structure 1904 and the cladding material 1920. Moreover, the Final Office Action does not rely up Okayasu and Delbare to teach the claimed “copper clads.” Applicants respectfully submit that Okayasu and Delbare cannot remedy the above-noted deficiencies of Noddings. In other words, Applicants respectfully submit that Okayasu, Delbare and Noddings, whether taken individually or in combination, do not teach or suggest the claimed combination including at least the feature of “a fourth step of placing copper clads on the upper and lower sides of the semicured prepreg while aligning the copper clads with the semicured prepreg with the attachment members interposed between the semicured prepreg and the copper clads,” as recited by independent claim 8.

For similar reasons as those set forth above, Applicants respectfully submit that Okayasu, Delbare and Noddings, whether taken individually or in combination, do not teach or suggest the claimed combination including at least the feature of “a fourth step of placing a copper clad on

the first side of the waveguide layer while aligning the copper clad with the waveguide layer with the attachment member interposed between the epoxy resin and the copper clad," as recited by independent claim 9.

Accordingly, for at least the reasons set forth above, Applicants respectfully assert that the rejections of independent claims 5, 7, 8 and 9 should be withdrawn because all of the applied references, whether taken individually or in combination, do not teach or suggest each and every feature of these independent claims. MPEP § 2143.03 instructs that "[t]o establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 409 F.2d 981, 180 U SPQ 580 (CCPA 1974)." Further, Applicants respectfully submit that the rejection of claim 6 should also be withdrawn at least because of its dependency upon independent claim 5 and for the reasons set forth above.

Without other rejections pending, Applicants respectfully assert that claims 5-9 are in condition for allowance.

### **CONCLUSION**

In view of the foregoing, Applicants respectfully request entry of the amendments, reconsideration and the timely allowance of all pending claims. Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicants' undersigned representative to expedite prosecution.

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If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such as an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

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